Express Mail #
EV 388209409 US

Attorney Docket Number: 45251-46701

Multi-Use Floor Sign

Field of the Invention

This invention relates generally to floor signs and, more particularly to self-standing floor signs for displaying multiple messages.

Background of the Invention

It is often desirable to alert pedestrians to conditions caused by floor maintenance. For instance, while a waxed floor is drying people that tread on the floor will mar the uniform coating if they do not detour around the treated area. Custodians will typically place a self-standing sign on the floor with an appropriate message for passersby alerting them to the need to stay off of the wet floor. Signs in common use include messages such as "Wet Floor," "Detour," and "Area Closed For Cleaning."

Use of floor signs, though, is not limited to janitorial situations. Construction activities frequently make it desirous to post a sign alerting traffic to conditions caused by the construction. Likewise, law enforcement and other emergency respondents frequently need to cordon off areas for temporary access control. Moreover, entertainment events (or any gathering where large numbers of attendees may be unfamiliar with their surroundings) often create the need to provide pedestrians with messages directing them to their destination. Furthermore, the messages to be conveyed may change over time or with circumstances. All of these applications,

and others, call for the use of self-standing signs to convey appropriate messages to individuals in particular areas.

Others have attempted to provide multi-use signs in the past. One attempt provided a sign that includes a center rod bisecting the sign and multiple panels each containing one half of a message. These half-message panels are connected to the rod by an ear lying perpendicular to the plane defined by the panel. Thus, to form one message, these earlier signs require the cooperation of a front of one half-message panel and the back of another, adjacent, half-message panel.

Still other prior attempts at providing multi-use signs have provided a single sign extension affixed to the sign and extending vertically therefrom. However, because these extensions increase the overall height of the sign, the sign is more cumbersome to handle. Additionally, because the extension is affixed to the sign, changing the message on the extension requires disassembly of the sign. Accordingly, changing the message requires time and effort. Moreover, the extensions may become separated from the sign and misplaced. Furthermore, because the message on the original sign is fixed, it is possible that any given extension may carry a message that conflicts with the message of the original sign. Accordingly, some extensions may be incompatible with some signs.

Thus, a need exists to provide signs that are capable of selectively conveying multiple messages without requiring cumbersome techniques to change the displayed message.

Summary of the Invention

It is in view of the above problems that the present invention was developed. The invention provides self-standing floor signs that allow the user to quickly, conveniently, and inexpensively change the message displayed on a sign. Additionally, the present invention provides a kit to retrofit existing single-use message signs to include multi-use capability.

In a first preferred embodiment, the present invention provides a self-standing floor sign that includes two support panels, a transverse handle, a runner, and at least one movable panel. Each of the panels includes a surface on which messages may be displayed. The transverse handle is coupled to the proximal ends of the support panels in such a manner that the support panels define an angle therebetween. Moreover, the coupling of the handle and the support panels defines a handle aperture between the handle and the panels. The runner encircles the handle with the movable panels sliding along the runner. Thus, a user may select the messages for display by repositioning the movable panel.

The sign may also include a second movable panel that slides along the runner so that the first movable panel can display a message from one side of the sign and the second movable panel can display a message from the other side of the sign. Additionally, the messages on the movable panels may be the same. Several techniques may be used to retain the runner on the sign. For instance, a retainer can couple the runner and the handle. In the alternative, the handle and one of the support panels may cooperate to retain the runner in the handle aperture.

Other preferred embodiments provide movable panels with additional useful features. In one such preferred embodiment, the handle aperture may extend through the movable panels. In yet another preferred embodiment, the movable panels may include extensions from their

proximal ends that extend beyond the location where the panel slidably engages the runner. Furthermore, the extensions may extend to the handle and cooperate with each other to concentrically space the runner apart from the handle. In other alternative embodiments, the panels may include an eyelet that slidably engages the runner. In still other preferred embodiments, the runner may be a ring, a band, a loop, or a lanyard, and may completely, or partially, encircle the handle.

In yet another preferred embodiment, the present invention provides a kit for self-standing floor signs where the signs typically include a first and a second support panel and a transverse handle. The support panels include surfaces on which messages may be displayed. The transverse handle is coupled to the proximal ends of the support panels so that the support panels define an adjustable angle therebetween. Additionally, the handle and the support panels define a handle aperture between them when they are coupled.

The kit of the current embodiment includes a runner and a movable panel for displaying a message. The movable panels slidably engage the runner. Moreover, the runner is adapted to at least partially encircle the handle, although the runner may also completely encircle the handle. Further, the accessory may include a second movable panel similar to the first. In other preferred embodiments, a retainer is provided to couple the accessory to the sign. In the alternative, the runner may be adapted to be retained by the handle and the first support panel.

Further features and advantages of the present invention, as well as the structure and operation of various embodiments of the present invention, are described in detail below with reference to the accompanying drawings.

Brief Description of the Drawings

The accompanying drawings, which are incorporated in and form a part of the specification, illustrate the embodiments of the present invention and together with the description, serve to explain the principles of the invention. In the drawings:

Figure 1 illustrates a sign constructed in accordance with a preferred embodiment of the present invention;

Figure 2 illustrates a perspective view of the preferred embodiment of Figure 1;

Figure 3 illustrates a side elevational view of the preferred embodiment of Figure 1;

Figure 4 illustrates a side elevational view of a sign in accordance with another preferred embodiment of the present invention;

Figure 5 is a detail view taken along line 5-5 in Figure 1 of a preferred embodiment of a runner of the sign of Figure 1;

Figure 6 illustrates another preferred embodiment of the present invention; and

Figure 7 illustrates yet another preferred embodiment of the present invention.

Detailed Description of the Preferred Embodiments

Referring to the accompanying drawings in which like reference numbers indicate like elements, Figure 1 illustrates a self-standing floor sign in accordance with a preferred embodiment of the present invention. In general the sign includes a pair of stationary support panels and a plurality of movable message panels. The user selects which message panels are visible by positioning the movable panels on one side, or the other, of the sign.

Hereinafter, the term "sign" will refer to an assembly for displaying at least one message. A "message" is a symbol or group of symbols (e.g. graphic or textual) or other indicia that conveys information. A "message panel" is a panel that has a message imprinted on it or added by other techniques suitable for displaying the message. For example a message may be added to a panel by painting, embossing, or other suitable means. Further, any sign capable of selectively displaying a plurality of messages is herein termed "multi-use."

With reference now to Figures 1 and 2, the sign 10 includes a pair of support panels 12, a handle 14, a pair of hinges 16, a plurality of movable panels 20A to 20C, a runner 22, a handle aperture 24 and a cordon tape hook 26. Each of the support panels 12 includes a proximal (or upper) end 30, a distal end 32, a length 33 and a surface 34 (see Figures 2 and 3). The movable panels 20A to 20C also include surfaces 36, 38, and 40 respectively. Preferably, the movable panels 20 include index tabs 42 and have a length 44. The length 44 is defined between the proximal and distal ends 46 and 47. Additionally, the movable panels 20 may include an eyelet 48 near the proximal end 46.

In general the sign 10 is constructed as follows. The handle 14 is coupled to the support panels 12 via the hinges 16. The runner 22 encircles the handle 14 and carries the movable panels 20 via the eyelets 48. The eyelets 48 allow the movable panels 20 to slide along the runner 22. Each of the movable panels 20 typically rests against one of the support panels 12 or against other movable panels 20 already resting against a support panel 12. In a preferred embodiment, each movable panel 20 rotates between a first position wherein the support panel 12A supports the movable panel 20 and a second position wherein the other support panel 12B supports the movable panel 20. In the first position one surface (e.g. surface 36) is visible while

in the second position the other surface (e.g. 36') is visible. Preferably, the proximal end 30 of each of the support panels 12 couples to the handle 14 near outer ends of the handle 14. The proximal end 46 of each of the movable panels 20 lays inward from the support panels 12 and may at least partially, and preferentially substantially, overlap the support panels 12 as shown, in Figures 1 and 2. The runner 22 passes through the eyelets 48 of the movable panels 20 near the handle aperture 24. Approximately centered along the handle 14, the handle aperture 24 passes through all of the panels 12 and 20 to facilitate the user gripping the handle 14.

Turning now to Figure 3, various features of the panels 12 and 20 are further illustrated. In particular, the support panels 12 have surfaces 34 whereupon messages or message panels may be displayed. The movable panels 20 have surfaces 36, 38, and 40 (on the clockwise side of the panels 20 as viewed in Figure 3) and surfaces 36', 38', and 40' (on the counterclockwise side of the panels 20 as viewed in Figure 3). Thus, as indicated by Figure 3, surfaces 36 and 40' may be the outermost surfaces of the sign 10, whereas Figure 4 shows outwardly facing surfaces 40 and 34B being displayed. Each of the surfaces 34 to 40 may have unique messages displayed thereon, or may have message panels attached thereto. In another preferred embodiment, the pairs of surfaces 34 to 40 visible at the same time (e.g. surfaces 36 and 34B of Figure 4) may display the same message so that passersby in both directions see the same message.

The present invention also provides signs with one or more of the surfaces 34 to 40 being blank. Thus, when the blank surface is displayed on one side of the sign 10, and the other side displays a message, the sign 10 may be read from only the one side, in effect creating a "one-way" sign. Such one-way signs are particularly useful in applications where traffic moving in one direction needs to be appraised of a message, whereas traffic in the other direction does not.

An exemplary sign 10 that displays the message "Do Not Enter" on one side and nothing on the other side may be set at an exit to discourage traffic from entering the exit while allowing exiting traffic to proceed. In an alternative, two of the movable panels 20 may include blank surfaces that are positioned relative to one another such that the two blank surfaces may be visible at the same time on opposite sides of the sign 10. When the sign 10 is not in use, the blank surfaces may thus be "displayed" thereby saving the message bearing surfaces from wear and tear (particularly sunlight induced fading).

To aid the user in selecting the panels 12 and 20 to display, index tabs 42 may be provided on the distal ends 47 of the movable panels 20 with labels to identify the message displayed thereon (see Figure 1). The support panels 12 may also have identifying labels affixed thereto (not shown) positioned to be visible even with the movable panels 20 lying thereover. Preferably, the movable panels 20 include a length 44 that is shorter than the length 33 of the support panels 12 to avoid interference from the floor as the panels 20 move along the runners 22 about the handle 14.

With reference to Figure 5, each of the movable panels 20 includes toward its proximal end 46 bushings, or eyelets 48, that lay flush in the panel 20. In a preferred embodiment, the eyelets 48 are unlined holes defined by the body of the movable panels 20, although the holes 48 could include bushings or other liners to reduce wear between the movable panels 20 and the runners 22. If so, it is preferred that the bushings are either flush with, or recessed into, the body of the movable panel 20. The eyelet 48 slides along the runner 22 to enable the positioning of the movable panels 20 as discussed herein. By employing eyelets 48 that lie entirely within, or parallel to, the panel 20, the present invention enjoys a number of advantages over prior attempts

at providing multi-use signs. First, the eyelet 48 allows for a panel 20 having a thinner profile and lighter construction. The present invention also requires no cooperation between panels 12 and 20 to display a message. Additionally, a given panel 12 or 20 conveys an entire message whether other adjacent panels 12 or 20 have been correctly positioned adjacent it. Thus, the assembly and use of the sign 10 is simple, quick, and inexpensive.

A comparison of Figures 3 and 4 shows additional features of the runner 22. In particular, the runner 22 may float with respect to the handle 14. Figure 3 shows the runner 22 concentrically positioned relative to the handle 14, whereas Figure 4 shows the center of runner 22 offset from the center of the handle 14. The runner 22 is retained by the sign 10, for example by the runner 22 passing through the handle aperture 24 (see Figure 2). A coupling between the runner 22 and the handle 14, therefore, is not necessary for the successful practice of the current invention, although the runner 24 could be coupled to the handle 14. For instance, the runner 22 could be molded into the handle 14. Nor does the runner 22 have to completely encircle the handle 14. Rather, the runner 22 may partially encircle the handle 14, as shown by Figure 4 wherein the runner 22 is open between the support panels 12. With such a runner 22, the user may slightly spread the open ends of the runner 22 and slip it over the handle 14 to place the movable panels 20 on the sign 10. Preferably, a pair of appropriately sized stops (not shown) on either open end of the runner 22 prevents the movable panels 20 from sliding off the runner 22.

In another preferred embodiment, the bodies of the support and movable panels 12 and 20 extend through the area where the handle aperture 24 is illustrated. In other words, the current embodiment includes no handle aperture 24. Thus, the area of the surfaces 34, 36, 38, and 40 (and opposite surfaces 34', 36', 38', and 40' as well) is expanded to include larger

messages. This embodiment is particularly well-suited for displaying messages conveyed in more than one language. Thus, for example a message could be conveyed on one a surface in both English and Spanish. Further, a separate handle may be added to the sign by adapting the handle to engage the runners 22 in a manner similar to the manner the movable panels 20 engage the runners 22 (i.e. providing eyelets in the handle body that are spaced apart the same distance as the runners 22 are spaced apart). In the alternative, the handle may include detents that snap over the runners 22 so as to leave the handle slidably engaging the runners 22.

In operation, the user grips the handle 14 and carries the sign 10 to a desired position for display. The user then sets the sign 10 on the floor and adjusts the angle 52 between the panels 12 using hinges 16. Also, the user may minimize the angle 52 for storage by closing the support panels 12. Otherwise, the panels 12 generally remain stable with their distal ends spaced apart to support the sign 10 on the floor in an upright position when the sign 10 is in use. If the sign 10 is not already displaying the desired message, the user reads the index tabs 42 to identify the message desired for display. Then the user slides the appropriate panels 20 along the runner 22 to the other side of the sign 10, thereby displaying the desired message. A latch, clamp, clasp, or snap 53 is also coupled to the support panels 12 so that when the movable panels 20 have been moved to the desired positions, the latch 53 secures the movable panels 20 in position against the support panels 12. The latch 53 also provides added convenience in that the latch 53 may be used to secure the movable panels 20 when the user wishes to move the sign 10 to a new location. Additionally, a hook 26 that is in, or adjacent to, the aperture 24 may be provided to allow cordon tape/rope to be strung through a series of signs 10. Thus, the signs 10 also provide access control.

With reference now to Figure 5, a runner 122 is shown positioned concentrically around a handle 114. A retainer 123 is shown coupling the runner 122 to the handle 114. Because the retainer 123 is positioned within the angle 52 the movable panels 120 may rotate to the desired positions without interference from the retainer 123. Figure 5 also shows extensions 150 of the proximal ends 146 of the movable panels 120 in accordance with another preferred embodiment. Generally, the extensions 150 extend from the eyelets 148 and toward the handle 114. Further, the extension 150 is shown extending to the near proximity of, and nearly abutting, the handle 114 (or retainer 123). A small gap is shown between the extension 150 and the handle 114 that facilitates movement of the movable panels 120. In one embodiment, all of the movable panels 120 on the sign 110 include extensions 150 of the same length so that all of the extensions 150 nearly abut the handle 114. Accordingly, the movable panels 120, acting in cooperation, center the runner 122 about the handle 114 even in the absence of a retainer 123. Thus the panels 120 will move smoothly along the runner 122 without undue play therebetween. Of course, the extensions 150 may be of any length that allows movement of the movable panels 120 on the runner 122.

Those skilled in the art will also recognize that whereas, the runner 122 and handle 114 have been shown to be circular, no corresponding limitations are thereby implied regarding the invention. Generally, the runner 122 may be flexible or rigid and may have any suitable shape allowing the desired motion of the movable panels 120. For instance, the runner 122 may be a ring, a band, a lanyard, a string, a chain, a loop, or any other suitable device allowing the desired motion of the movable panels.

Now with reference to Figure 6, yet another preferred embodiment of the present invention is illustrated. The current embodiment includes a kit, accessory, or retrofit assembly 211 for adding multi-use capability to a conventional single-use floor sign. As show, the sign 209 typically includes a pair of support panels 212, a transverse handle 214 and two surfaces 234A and 234B for displaying messages.

The accessory 211 includes a plurality of movable panels 220 and a runner 222 as shown. To convert the single-use sign 209 to a multi-use sign, the user removes the support panels 212 from the handle 214. The user slips the runner 222 over the handle 214 and reassembles the sign with the runner 222 positioned in the handle aperture 224. Once on the sign 209, the movable panels 220 may then be positioned to show any of the multiplicity of messages thereon.

With reference now to Figure 7, a kit, or sign, constructed in accordance with another preferred embodiment of the present invention is shown. The kit 311 generally includes a different support arrangement then in the previous embodiments. Though the support arrangement shown in Figure 7 may be adapted for use with the other embodiments without departing from the spirit and scope of the present invention.

More particularly, the support 360 includes a hook 362, a hand grip 364, a race 366 and stops or retainers 368. Generally, the movable panels 320 engage, and rotate around, the runner 322 in such a manner as to allow the user to display the messages on the surfaces of the movable panels 320. The runners 322 at least partially encircle the transverse body 361 of the support 360 and are prevented from slipping off of the body 361 by the stops 368 that define the race 366. Thus, the support 360 may rotate within the runners 322 so that either hook 362 or grip 364 is generally disposed above the body 361. The handle aperture 324, the hook 362, and the grip 364

are sized relative to one another to facilitate the rotation of the support 360. With the hook 362 disposed above the body 361 the kit 311 may be hung from a rail, hook, or other suitable structure for display whereas the grip 364 being disposed above the body 361 facilitates the user's ability to carry the kit 311 and the sign 309 (when the kit 311 is on the sign 309).. In the alternative, the stops 368 may be sized smaller than the inside diameter of the runner 322 to allow the user to slip the support 360 through the runners, With the support 360 so removed from the kit 311, the kit 311 may then be added to signs in which the hook 362 and grip 364 are not necessary (e.g. the self-standing floor sign 10 of Figure 1).

Also, while a hook 362 associated with the runners 322 via the support 360 has been illustrated for supporting the kit 311 as a self contained sign, the support 360 may instead (or in addition) include a clamp, clasp, snap, eyelet or other device suited for the intended purpose of hanging the sign 311 from an overhead support. Additionally, the hook 362 may be associated with a movable panel 320 by, for example, being coupled to the movable panel 320 instead of being associated with the runner 322.

In view of the foregoing, it will be seen that the several advantages of the invention are achieved and attained. Numerous embodiments of multi-use self-standing floor signs have been described. Additionally, the present invention eliminates the need for separate storage of single use signs. Moreover, because various messages are provided on the signs in accordance with the present invention, users may quickly change the message displayed by a sign by re-positioning movable panels. Moreover, one sign may be employed in a number of different applications thereby reducing the required inventory of signs otherwise required.

The embodiments were chosen and described in order to best explain the principles of the invention and its practical application to thereby enable others skilled in the art to best utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated.

As various modifications could be made in the constructions and methods herein described and illustrated without departing from the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative rather than limiting. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims appended hereto and their equivalents.